

Remarks

The Office Action dated October 2, 2003 and Advisory Action dated March 23, 2004 have been carefully reviewed and the foregoing amendment has been made in consequence thereof.

Claims 1-20 are pending in this application. Claims 1, 2, 5, 6, 9-12, 15, 16, 19, and 20 stand rejected. Claims 3, 4, 7, 8, 13, 14, 17, and 18 have been withdrawn.

In accordance with 37 C.F.R. 1.136(a), a three month extension of time is submitted herewith to extend the due date of the response to the Office Action dated October 2, 2003, for the above-identified patent application from January 2, 2004, through and including April 2, 2004. In accordance with 37 C.F.R. 1.17(a), authorization to charge a deposit account in the amount of \$950.00 to cover this extension of time request also is submitted herewith.

The rejection of Claims 1, 2, 5, 6, 9-12, 15, 16, 19, and 20 under 35 U.S.C. § 103(a) as being unpatentable over De Briere et al. (US 4,394,345) in view of Johnson (US 6,332,011) is respectfully traversed.

De Briere et al. describe an ultrasonic transducer assembly that positions the ultrasonic transducers adjacent the top surface of a jet pump beam (see Figures 3 and 4) or adjacent the side surfaces of the jet pump beam (see Figures 7 and 8). De Briere et al. do not describe nor suggest positioning the ultrasonic transducers adjacent the bottom surface of the jet pump beam. Rather, De Briere et al. teach away from positioning ultrasonic transducers adjacent the bottom surface of the jet pump beam because the ultrasonic transducer assembly taught by De Briere et al. is incapable of positioning an ultrasonic transducer adjacent the bottom surface of the jet pump beam.

Johnson describes a method of scanning a shroud weld that includes positioning a phased array ultrasonic probe on an upper surface of the shroud head flange. Johnson does not describe nor suggest positioning a phased array ultrasonic probe adjacent the bottom surface of a jet pump beam.

Claim 1 of the present application recites a method of inspecting a jet pump beam in a nuclear reactor that includes the step of "positioning at least one ultrasonic phased array probe adjacent the bottom surface of the jet pump beam, wherein the at least one ultrasonic phased array probe is positioned under the bottom surface of the jet pump beam".

Claim 11 of the present application recites a method of inspecting a jet pump beam in a nuclear reactor that includes the step of "positioning at least one ultrasonic phased array probe adjacent the bottom surface of the jet pump beam, wherein the at least one ultrasonic phased array probe is positioned under the bottom surface of the jet pump beam".

De Briere et al. and Johnson , alone or in combination, do not describe nor suggest a method of inspecting a jet pump beam in a nuclear reactor as recited in Claim 1 nor a method of inspecting a jet pump beam in a nuclear reactor as recited in Claim 11. Particularly, De Briere et al. and Johnson , alone or in combination, do not describe nor suggest positioning at least one ultrasonic phased array probe adjacent the bottom surface of the jet pump beam. Rather, Johnson describes positioning a phased array ultrasonic probe on an upper surface of the shroud head flange and De Briere et al. describe an ultrasonic transducer assembly that positions the ultrasonic transducers adjacent the top surface of a jet pump beam or adjacent the side surfaces of the jet pump beam. Therefore, modifying De Briere et al. with the phased array ultrasonic transducer of Johnson does not change the teachings of De Briere et al. to include that method

step of positioning at least one ultrasonic phased array probe adjacent the bottom surface of the jet pump beam. Further, there is no motivation to modify the teachings of De Briere et al. to include positioning a phased array ultrasonic transducer adjacent the bottom surface of the jet pump beam because the De Briere et al. apparatus is incapable of performing this operation.

De Briere et al. describe an ultrasonic transducer assembly that positions the ultrasonic transducers adjacent the top surface of a jet pump beam or adjacent the side surfaces of the jet pump beam. Applicants submit that the ultrasonic transducer assembly shown in Figures 3-8 of De Briere et al. is incapable of positioning at least one ultrasonic phased array probe adjacent the bottom surface of the jet pump beam. Applicants submit that the apparatus and description of De Briere et al. teach away from the methods recited in independent Claims 1 and 11 of the present invention. Specifically, De Briere et al. teach examining the jet pump beam for cracks from below by positioning ultrasonic transducers adjacent the sides of the beam (see Col. 6, lines 1-10).

As the Federal Circuit has recognized, "it is impermissible . . . to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art." *In re Wesslau*, 147 USPQ 391, 393 (CCPA 1965). See also, *Smithkline Diagnostics, Inc. v. Helena Laboratories, Corp.*, 8 USPQ2d 1468, 1475 (Fed. Cir. 1988) ("claims, entire prior art, and prior art patents must be read 'as a whole'"). Also, if art "teaches away" from a claimed invention, such a teaching supports the nonobviousness of the invention. *U.S. v. Adams*, 148 USPQ 479 (1966); *Gillette Co. v. S.C. Johnson & Son, Inc.*, 16 USPQ2d 1923, 1927 (Fed. Cir. 1990). Also, the prior art reference or combination of references must

teach or suggest all the limitations of the claims. See *In re Zurko*, 111 F.3d 887, 888-89, 42 U.S.P.Q.2d 1476, 1478 (Fed. Cir. 1997). And the teachings or suggestions, as well as the expectations of success, must come from the prior art, not applicant's disclosure. See *In re Vaeck*, 947 F.2d 488, 493, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991). In this case, De Briere et al., "read as a whole", teach an ultrasonic transducer assembly that positions ultrasonic transducers adjacent the sides of the jet pump beam to examine the beam for cracks from below. Also, Applicants submit that modifying the ultrasonic transducer assembly of De Briere et al. with the phased array ultrasonic probes of Johnson will not produce an apparatus that positions phased array ultrasonic probes adjacent the bottom surface of a jet pump. Further, De Briere et al. teach away from the claims of the present application because the apparatus taught by De Briere et al. is incapable of positioning the transducers below the jet pump beam and adjacent the bottom surface of the jet pump beam.

Further, in the response to a Section 112, first paragraph, rejection on the Office Action dated July 11, 2003, Applicants argued that "In this case, Applicants submit that the specification is complete and that one skilled in the art would know how to position an ultrasonic phased array probe adjacent the bottom surface of the jet pump beam. Any suitable means of positioning the ultrasonic phased array probe would satisfy the recitations of the claims, for example, an ultrasonic probe positioning tool, a robotic tool manipulator, or manual positioning by hand. Applicants submit that the scope of the claims are not limited by the means that is used by one skilled in the art to position the ultrasonic phased array probe adjacent the bottom surface". The Examiner has misrepresented Applicants' argument in the current Office Action and Advisory Action. Applicants did not admit that it was known to position an ultrasonic phased array probe

adjacent the bottom surface of the jet pump beam to inspect the beam for cracks. Applicants' only assertion was that Applicants' specification is complete and that one skilled in the art could practice the invention because one skilled in the art would know how to position an ultrasonic phased array probe adjacent the bottom surface of the jet pump beam.

Further, the Office Action, at page 3, has suggested that because Applicant admits that one skilled in the art would know how to position an ultrasonic phased array probe adjacent the bottom surface of the jet pump beam and because De Briere et al. teach examining the jet pump beam for cracks from below by positioning ultrasonic transducers adjacent the sides of the beam (see Col. 6, lines 1-10) that "One having ordinary skill in the art would have recognized that it would be advantageous to locate a crack detector nearest the potential or suspected location of a structural crack, e.g., for more precise characterization of the extent of cracking". Applicants disagree with this suggestion because there is no indication in De Briere et al. and Johnson that positioning a "crack detector" nearest the potential or suspected location of a structural crack" will produce a more precise characterization of the extent of cracking. Particularly, if this mere assertion was true, De Briere et al. would insist on dismantling the jet pump beam assembly to position the ultrasonic transducers adjacent the top surface of the raised central portion to examine the raised central portion of the beam. Specifically, De Briere et al. teach that examining the jet pump beam for cracks from below by positioning ultrasonic transducers adjacent the sides of the beam is necessary since the flat weld plate obstructs examination from above (see Col. 6, lines 1-10). Further, Applicants submit that following the assertion of the Office Action, with the beam assembled, the closest position of the "crack detector" to the raised central portion of the beam is the side of the beam rather than the bottom of the beam.

Accordingly, Applicants submit that it would not be obvious to modify De Briere et al. to include the method step of positioning at least one ultrasonic phased array probe adjacent the bottom surface of the jet pump beam.

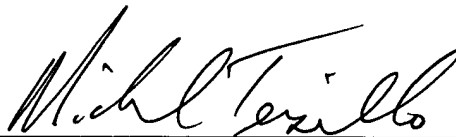
At least for the reasons set forth above, Applicants submit that independent Claims 1 and 11 are patentable over De Briere et al. and Johnson, alone or in combination.

Claims 2, 5, 6, and 9-10 depend from independent Claim 1, and Claims 12, 15-16, and 19-20 depend from independent Claim 11. When the recitations of dependent Claims 2, 5, 6, and 9-10 and dependent Claims 12, 15-16, and 19-20 are considered in combination with the recitations of Claims 1 and 11 respectively, Applicants respectfully submit that Claims 2, 5, 6, 9-10, 12, 15-16, and 19-20 likewise are patentable over DeBriere et al. and Johnson, alone or in combination.

For the reasons set forth above, Applicants respectfully request that the Section 103(a) rejection of Claims 1, 2, 5, 6, 9-12, 15, 16, 19, and 20 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Favorable action is respectfully solicited.

Respectfully submitted,



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